

[3.0063]

Pteromicra melanothrix MELANDER, NEW SYNONYM OF
Antichaeta melanosoma MELANDER, WITH A KEY TO THE
NEARCTIC SPECIES OF *Pteromicra* LIOY (Diptera: Sciomyzidae)¹

L. V. Knutson²

Pteromicra melanothrix Melander, 1920 (page 313), was described from 1 male collected at Yellowstone Lake, Wyoming, August 9, 1918, and *Antichaeta melanosoma* Melander, 1920 (page 318), was described from 1 female collected during July in Polk County, Wisconsin. Comparison of the holotypes of *P. melanothrix* and *A. melanosoma*, which are now in the United States National Museum of Natural History, Washington, has revealed that these represent 1 species of the genus *Antichaeta* Haliday. Furthermore, the male genitalia of the holotype of *P. melanothrix* compare exactly with published figures of the genitalia of *A. melanosoma* (Steyskal, 1960), with genitalia of specimens associated with females and obtained during rearings in Ithaca, New York, and with other specimens of *A. melanosoma* from Quebec, Ontario, New York, Ohio, Michigan, Wisconsin, North Dakota, Nebraska, Idaho, Utah, and Wyoming. *Antichaeta melanothrix* (Melander), 1920, new combination, is placed as a junior synonym of *Antichaeta melanosoma* Melander, 1920.

Species of *Antichaeta* lack a propleural bristle and belong to the Tetanocerini; species of *Pteromicra* Lioy have a propleural bristle and are placed in the Sciomyzini. Many species of *Antichaeta* are very similar in size and color pattern to *Pteromicra*, but they may be further distinguished from *Pteromicra* by the following characters: arista with black hairs; midfrontal stripe broad, shiny and complete; hind tibia with 2 dorsal pre-apical bristles; epandrium of the male postabdomen strongly asymmetrical; fifth abdominal sternum projecting under the postabdomen in the male; anterior surstylus of the male

¹Accepted for publication: September 23, 1970.

²Systematic Entomology Laboratory, USDA, c/o [U.S.] National Museum of Natural History, Washington, DC 20560.

postabdomen rudimentary. In *Pteromicra*, the arista is black- or white-haired, the frons is entirely shiny; the hind tibia has only 1 dorsal pre-apical bristle; the epandrium is symmetrical; the fifth sternum does not project under the postabdomen, and both the anterior and posterior surstyli are well developed.

The genus *Pteromicra* is known exclusively from the northern hemisphere. The world species were reviewed by Steyskal (1954); additional Nearctic species were described by Fisher and Orth (1966), Foote (1959), Knutson and Zuska (1968), and Steyskal (1956, 1958), and a key to the Nearctic species was presented by Foote (1959). A study of the biology, morphology of immature stages, and classification of adults of European *Pteromicra* entailed changes of names of 2 Holarctic species (Rozkošný and Knutson, 1970).

A revised key to the Nearctic species is presented below. I have not been able to recognize *P. apicata* (Loew, 1876), and I have found no characters in the description of the female holotype of *P. apicata* that will distinguish this species from all specimens of *P. pectorosa* (Hendel). The type material of *P. pectorosa* was examined recently (Rozkošný and Knutson, 1970); the genitalia of North American and European specimens compare exactly, although there are minor differences in coloration. Study of additional material of *Pteromicra inermis* Steyskal may show this species to be better placed in the genus *Sciomyza* Fallén. The holotype of *P. inermis* has 1 dorsal pre-apical bristle on 1 of the front tibia and 1 strong bristle and 1 weaker bristle on the other front tibia; other specimens show 2 well developed bristles.

The food snails, where known, are included as the last entry in each couplet of the key. Information on geographical distribution (based on the above papers and on Steyskal, 1965; T. W. Fisher, B. A. Foote, and R. E. Orth, personal communication, and specimens in the U. S. N. M. and Cornell University) also is included in the key. The distribution of the closely related and common *P. pleuralis* and *P. siskiyouensis* are shown in Fig. 1. I thank T. W. Fisher, B. A. Foote, and R. E. Orth for helpful criticism of the key.

KEY TO THE NEARCTIC SPECIES OF *Pteromicra* LLOYD

1. Front femur without pecten (series of short, closely-spaced spinules located apically on anteroventral margin); pteropleuron with 2 or 3 long bristles in addition to several shorter bristly hairs; 2 pairs of fronto-orbital bristles 2
- Front femur with pecten; pteropleuron with small patch of short hairs only 5

- 2(1). Antenna entirely black; palpus black; front femur mostly yellowish (Mich., Kans., Sask.) (*Succinea* sp.) **anopla** Steyskal
 Antenna yellowish to brownish; palpus yellowish or black; front femur entirely black or black on apical 1/2 to 2/3. 3
- 3(2). Palpus yellow in male, black in female; front femur black on apical 1/2 to 2/3 in male, entirely black in female (N. Y.) (*Lymnaea* spp.) **inermis** Steyskal
 Palpus yellow in both sexes; front femur completely black in both sexes 4
- 4(3). Front tarsus pale basally; wing not patterned; posterior surstylus without process on anterior margin (Colo.) (*Pupilla* sp.)
 **perissa** Steyskal
 Front tarsus black basally; wing patterned; posterior surstylus with process on anterior margin (Mont., Colo.) **rudis** Knutson and Zuska
- 5(1). Palpus completely yellow 6
 Palpus black, at least apically 11
- 6(5). Two pairs of fronto-orbital bristles, anterior pair often much shorter 7
 One pair of fronto-orbital bristles. 9
- 7(6). Front tarsus usually completely black, at most last segment in male sometimes yellowish to brown; wings brownish to black with whitish tomentum (Alaska, Popoff Is. and Amchitka Is.; Europe) (small Planorbidae, Lymnaeidae, Succineidae).
 **angustipennis** (Staeger) (= **glabricula** authors)
 Front tarsus with last 1-3 segments whitish; wings broader; hypopleuron yellowish, rarely with faint whitish tomentum 8
- 8(7). Dorsum of thorax shiny black (B. C., Wash., Europe) (small Planorbidae) **leucopeza** (Meigen)
 Dorsum of thorax mostly yellowish, blackish only anteriorly (N. H., Mass., N. Y., Iowa) (*Discus cronkhitei* (Newcomb))
 **steyskali** Foote
- 9(6). Thoracic pleura entirely dark brown to black; hypopleuron and sternopleuron with dense whitish tomentum; head mostly black 10
 Thoracic pleura mostly yellowish to light brown; hypopleuron yellow; hypopleuron and sternopleuron with sparse whitish tomentum; head extensively yellow (Alaska, B. C., Wash., Calif., Mont., S. D., Alta., Man., Mich., Ont., Que., N. Y., Europe)

- (many non-operculate aquatic and hygrophilous snails) **pectorosa** (Hendel)
- 10(9). Male posterior surstylus pointed apically, with anteriorly directed process located midway on anterior margin (distribution, Fig. 1). **siskiyouensis** Fisher and Orth
- Male posterior surstylus rounded apically, with inwardly directed process on anterior margin near base (distribution, Fig. 1 (many non-operculate aquatic and hygrophilous snails) **pleuralis** (Cresson)
- 11(5). Two pairs of fronto-orbital bristles 12
- One pair of fronto-orbital bristles 13
- 12(11). Metapleuron black; hind legs entirely yellow (Maine, N. H., Mass., Conn.) **albicalceata** (Cresson)
- Metapleuron mostly yellowish; apex of hind femur blackish (Que., N. Y., N. J., Mich.) (Planorbula spp.) **similis** Steyskal
- 13(11). Frons yellowish apico-medially; arista brown, long plumose; third antennal segment usually darkened apico-dorsally (D. C., Mich., S. D.) (Physa spp.) **sphenura** Steyskal
- Head entirely black (occasionally tomentose on facial orbits); arista white, short plumose; third antennal segment almost entirely black (Wash., Idaho, Wyo.) (Gyraulus spp.) **leucothrix** Melander

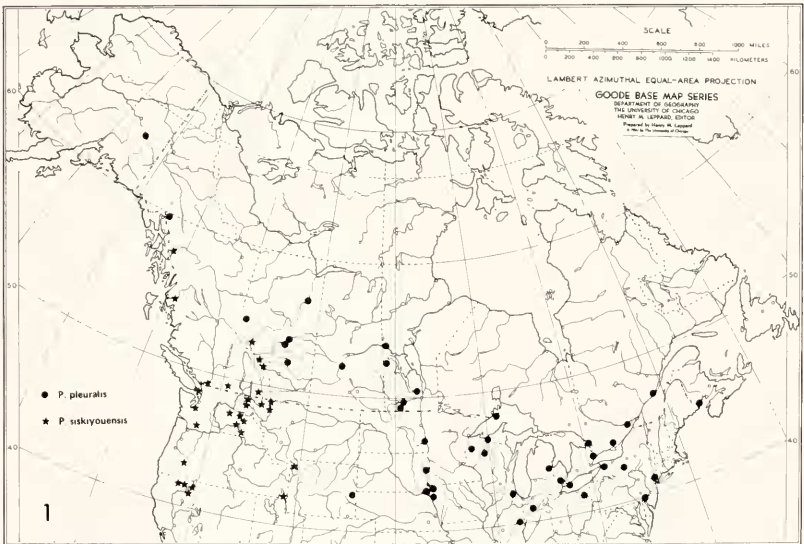


Fig. 1. Distribution of *Pteromicra siskiyouensis* Fisher & Orth and *P. pleuralis* (Cresson).

Literature cited

- Fisher, T. W. and R. E. Orth. 1966. A new species of *Pteromicra* from western North America and resurrection of *Pteromicra pleuralis* (Cresson). Pan-Pacific Ent., 42: 307-318.
- Foote, B. A. 1959. A new species of *Pteromicra* reared from land snails, with a key to the Nearctic species of the genus. Proc. Ent. Soc. Washington, 61: 14-16.
- Knutson, L. V. and J. Zuska. 1968. A new species of *Pteromicra* and of *Euthycera* from western North America (Diptera: Sciomyzidae). Proc. Ent. Soc. Washington, 70: 78-84.
- Loew, H. 1876. Beschreibungen neuer amerikanischer Dipteren. Zeitschr. f. gesam. Naturwiss., 48: 317-340.
- Melander, A. L. 1920. Review of the Nearctic Tetanoceridae. Ann. Ent. Soc. America, 13: 305-332.
- Rozkošný, R. and L. V. Knutson. 1970. Taxonomy, biology, and immature stages of Palearctic *Pteromicra*, snail-killing Diptera (Sciomyzidae). Ann. Ent. Soc. America, 63:1434-1459.
- Steyskal, G. C. 1954. The genus *Pteromicra* Lioy (Diptera, Sciomyzidae) with especial reference to the North American species. Papers Michigan Acad. Sci., 39: 257-269.
- . 1956. New species and taxonomic notes in the family Sciomyzidae (Diptera: Acalyptratae). Papers Michigan Acad. Sci., 41: 73-87.
- . 1958. A new species of the genus *Pteromicra* associated with snails (Diptera, Sciomyzidae). Proc. Ent. Soc. Washington, 59: 271-272.
- . 1960. The genus *Antichaeta* Holiday, with special reference to the American species (Diptera, Sciomyzidae). Papers Michigan Acad. Sci., 45: 17-26.
- . 1965. Family Sciomyzidae, in Stone, A., et al., A catalog of the Diptera of America north of Mexico. United States Dept. Agric. Hndbk. 276.

2.0063. *Pteromicra melanothrix* Melander, new synonym of *Antichaeta melanosoma* Melander, with a key to the Nearctic species of *Pteromicra* Lioy (Diptera: Sciomyzidae). Abstract.—*Antichaeta melanothrix* (Melander), 1920 (*Pteromicra*), new combination, is placed as a junior synonym of *Antichaeta melanosoma* Melander, 1920. A key to the 14 Nearctic species of *Pteromicra* Lioy serves to separate the species.—L. V. Knutson, Systematic Entomology Laboratory, USDA, c/o [U.S.] National Museum of Natural History, Washington, DC 20560.

Descriptors: Diptera; Sciomyzidae; *Pteromicra*; *Pteromicra melanothrix*; *Antichaeta melanosoma*; synonymy; key to species of *Pteromicra*; snail hosts.

(Continued from p. 246.)

International Commission on Zoological Nomenclature A. (n.s.) 86.—Announcement: Required six-month's notice is given on the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following insect names listed by case number (see Bull. Zool. Nomencl., 26, pt. 6, 7 April 1970):

1791, suppression of *Papilio aglaja* Linnaeus, 1758 (Lepidoptera); 1889, suppression of *Culex albirostris* Macquart, 1851 (Diptera); 1892, emendation to Sphaeridae of Sphaeriidae Erichson, 1845 (Coleoptera); 1897, type-species for *Trepsichrois* Hübner, 1816 (Lepidoptera); 1898, type-species for *Monroa* Warren, 1904, and *Hetererannis* Warren, 1904 (Lepidoptera); 1899, suppression of *Hymenitis* [Illiger], 1807 (Lepidoptera). (See Bull. Zool. Nomencl., 27, pt. 2, 10 August 1970): 1916, neotype for *Hyocephalus aprugnus* Bergroth, 1906 (Hemiptera); 1917, type-species for *Minecomutilla* Ashmead, 1903 (Hymenoptera); 1918, suppression of *Zealandobates* Hammer, 1967 (Acari); 1919, suppression of *Clavicera* Latreille, 1802 (Hymenoptera); 1921, neotype for *Saperda inornata* Say, 1824 (Coleoptera).

Comments should be sent in duplicate, citing case number, to the Secretary, International Commission on Zoological Nomenclature, c/o British Museum (Natural History), Cromwell Road, London SW7, England. Those received early enough will be published in the Bulletin of Zoological Nomenclature.—Margaret Doyle.

Received for publication: November 2, 1970.

Jean Walker Fox (1914-1970).—Mrs. Jean Walker Fox died in Pittsburgh, Pennsylvania, of a coronary involvement March 10, 1970. She was the wife of the late Dr. Richard M. Fox. As his devoted and able assistant and co-worker she had participated in the preparation of much of her husband's work on the Ithomine butterflies. They were joint authors of a number of publications, including a text-book—"Introduction to Comparative Entomology" (Reinhold Publishing Corporation, 1964). With her husband Mrs. Fox served on the staff of the Liberian Institute, American Foundation for Tropical Medicine during 1955-1957, and in 1958 accompanied him on an expedition to the Liberian interior. It was during her residence in Africa that she became interested in the Strepsiptera; later (1964-1969) publishing six papers on this order.

Mrs. Fox was born at Bradford, Pennsylvania, April 23, 1914. She attended Swathmore College and Pennsylvania College for Women (now Chatham College) taking her A. B. degree at the latter institution in 1934. Her marriage to Richard M. Fox took place in June of 1942. In 1949 she received her M. S. degree from the University of Pittsburgh.

Her active and varied scientific career included the following posts: Instructor in the Department of Zoology, Colorado College 1949-1954; Laboratory Assistant in water purity research program, Colorado Springs Department of Public Works 1951-1954; Research Assistant and Staff Librarian at the Liberian Institute, American Foundation for Tropical Medicine, Harbel, Liberia 1955-1957; Research Assistant in the Section of Insects and Spiders, Carnegie Museum 1962-1969.

See was a member of Sigma Xi, Phi Sigma, American Association for the Advancement of Science, American Microscopical Society, Entomological Society of America, and Swadner Entomological Society.—George E. Wallace, *Carnegie Museum, Pittsburgh, PA 15213.*

(Continued on p. 255.)